

Haemorrhoids

Haemorrhoids are dilated veins occurring in relation to the anus. Such haemorrhoids may be external or internal, i.e. external or internal to the anal orifice. The external variety is covered by skin, while the internal variety lies beneath the anal mucous membrane. When the two varieties are associated, they are known as interoexternal haemorrhoids.

The veins which form internal haemorrhoids become engorged as the anal lining descends and is gripped by the anal sphincters. The mucosal lining is gathered prominently in three places (the 'anal cushions'), which can be in the areas of the three terminal branches of the superior haemorrhoidal artery. The anal cushions are present in embryonic life and are necessary for full continence. Straining causes these cushions to slide downwards and internal haemorrhoids develop in the prolapsing tissues.

Haemorrhoids may be symptomatic of some other:

- **In carcinoma of rectum.** This, by compressing or causing thrombosis of the superior rectal vein, gives rise to haemorrhoids sufficiently often to warrant examination of the rectum and the rectosigmoid junction for a neoplasm in every case of haemorrhoids;
- **During pregnancy.** Pregnancy piles are due to compression of the superior rectal veins by the pregnant uterus and the relaxing effect of progesterone on the smooth muscle in the walls of the veins, plus an increased pelvic circulating volume;
- **From straining at micturition** consequent upon a stricture of the urethra — or an enlarged prostate;
- **From chronic constipation.**

Internal haemorrhoids

Internal haemorrhoids, which include intero-external haemorrhoids, are exceedingly common. Essentially, the condition is a dilatation of the internal venous plexus with an enlarged displaced anal cushion.

Aetiology

Hereditary

The condition is so frequently seen in members of the same family that there must be a predisposing factor, such as a congenital weakness of the vein walls or an abnormally large arterial supply to the rectal plexus.

Morphological

The weight of the column of blood unassisted by valves produces a high venous pressure in the lower rectum, unparalleled in the body.

Anatomical

The collecting radicles of the superior haemorrhoidal vein lie unsupported in the very loose submucous connective tissue of the anorectum. These veins pass through muscular tissue and are liable to be constricted by its contraction during defecation. The superior rectal veins, being tributaries of the portal vein, have no valves.

Exacerbating factors

Straining accompanying constipation or that induced by over purgation is considered to be a potent cause of haemorrhoids.

Pathology

Internal haemorrhoids are frequently arranged in three groups at 3, 7, and 11 o'clock with the patient in the lithotomy position. This distribution has been ascribed to the arterial supply of the anus whereby there are two subdivisions of the right branch of the superior rectal artery, but the left branch remains single, but this is now known to be atypical. In between these three primary haemorrhoids there may be smaller secondary haemorrhoids. Each principal haemorrhoid can be divided into three parts.

- **The pedicle** is situated at the anorectal ring. It is covered with pale pink mucosa.
- **The internal haemorrhoid**, which commences just below the anorectal ring. It is bright red or purple, and covered by mucous membrane.
- **An external associated haemorrhoid** lies between the den-tate line and the anal margin. It is covered by skin, through which blue veins can be seen, unless fibrosis has occurred.
- This associated haemorrhoid is present only in well-established cases.

Entering the pedicle of an internal haemorrhoid may be a branch of the superior rectal artery. Very occasionally there is a haemangiomatic condition of this artery — an 'arterial pile'—which leads to ferocious bleeding at operation.

Clinical features

Symptoms of haemorrhoids

- Bright red painless bleeding
- Mucus discharge
- Prolapse
- Pain only on prolapse

Bleeding is the principal and earliest symptom. At first the bleeding is slight; it is bright red and occurs during defecation (a 'splash in the pan'), and it may continue intermittently thus for months or years. Haemorrhoids that bleed but do not prolapse outside the anal canal are called **first-degree haemorrhoids**.

Prolapse is a much later symptom. In the beginning the protrusion is slight and occurs only at stool, and reduction is spontaneous. As time goes on the haemorrhoids do not reduce themselves, but have to be replaced digitally by the patient. Haemorrhoids that prolapse on defecation but return or need to be replaced manually and then stay reduced are called **second-degree haemorrhoids**.

Still later, prolapse occurs during the day, apart from defecation, often when patients are tired or exert themselves. Haemorrhoids that are permanently prolapsed are called **third-degree haemorrhoids**. By now, the haemorrhoids have become a source of great discomfort and cause a feeling of heaviness in the rectum but are not usually acutely painful.

Discharge

A mucoid discharge is a frequent accompaniment of prolapsed haemorrhoids. It is composed of mucus from the engorged mucous membrane. Pruritus will almost certainly follow this discharge.

Pain is absent unless complications supervene. For this reason, any patient complaining of 'painful piles' must be suspected of having another condition (possibly serious) and examined accordingly.

Anaemia can be caused very rarely by persistent profuse bleeding from haemorrhoids.

Examination and investigations

On inspection there may be no evidence of internal haemorrhoids. In more advanced cases, redundant folds or tags of skin can be seen in the position of one or more of the three primary haemorrhoids. When the patient strains, internal haemorrhoids may come into view transiently or, if they are of the third degree, they are, and remain, prolapsed.

Digital examination. Internal haemorrhoids cannot be felt unless they are thrombosed.

Proctoscopy

Just below the anorectal ring internal haemorrhoids, if present, will bulge into the lumen of the proctoscope.

Sigmoidoscopy should be done as a precaution in every case.

Complications

Profuse haemorrhage is not rare. Most often it occurs in the early stages of the second degree. The bleeding occurs mainly externally, but it may continue internally after the bleeding haemorrhoid has retracted or has been returned. In these circumstances, the rectum is found to contain blood.

Strangulation. One or more of the internal haemorrhoids prolapse and become gripped by the external sphincter. Further congestion follows because the venous return is impeded. Unless the internal haemorrhoids can be reduced within an hour or two, strangulation is followed by thrombosis.

Thrombosis. The affected haemorrhoid or haemorrhoids become dark purple or black and feel solid. Once the thrombosis has occurred, the pain of strangulation largely passes off, but tenderness persists.

Ulceration. Superficial ulceration of the exposed mucous membrane often accompanies strangulation with thrombosis.

Gangrene occurs when strangulation is sufficiently tight to constrict the arterial supply of the haemorrhoid. The resulting sloughing is usually superficial and localised. Very occasionally, massive gangrene extends to the mucous membrane within the anal canal and rectum, and can be the cause of spreading anaerobic infection and portal pyaemia.

Fibrosis. After thrombosis, internal haemorrhoids sometimes become converted into fibrous tissue. Fibrosis following transient strangulation commonly occurs in the subcutaneous part of a primary haemorrhoid. Fibrosis in an external haemorrhoid favours prolapse of an associated internal haemorrhoid.

Suppuration is uncommon. It occurs as a result of infection of a thrombosed haemorrhoid. Throbbing pain is followed by perianal swelling, and a perianal or submucous abscess results.

Pylephlebitis (portal pyaemia). Theoretically, infected haemorrhoids should be a potent cause of portal pyaemia and liver abscesses. It can occur when patients with strangulated haemorrhoids are subjected to ill advised surgery and has even been reported to follow banding.

Treatment of haemorrhoids***Symptomatic******Injection of sclerosant******Banding******Photocoagulation******Haemorrhoidectomy***

Nonoperative treatment is recommended when the haemorrhoids are a symptom of some other condition or disease except, of course, when a carcinoma is present. The bowels are regulated by hydrophylic colloids (Isogel, etc.) and if necessary a small dose of Senokot at night. Various proprietary creams can be inserted into the rectum from a collapsible tube fitted with a nozzle, at night and before defecation. Suppositories are also useful.

Active treatment. This consists of injection or treatment by elastic band applications to the base of each haemorrhoid or formal operation, each with specific indications. Treatment should not be withheld because the patient is elderly or infirm.

Injection treatment.

Indications. This is ideal for first-degree internal haemorrhoids which bleed. Early second-degree haemorrhoids are often cured by this method but a proportion relapses.

Banding treatment (Barron)

For second-degree haemorrhoids which are too large for successful handling by injections, treatment is available by slipping tight elastic bands on to the base of the pedicle of each haemorrhoid with a special instrument. The bands cause ischaemic necrosis of the piles, which slough off within a few days. The procedure should be painless if done properly, and can be performed in the out-patient department. Not more than two haemorrhoids should be banded at each session and 3 weeks at least should elapse between each treatment.

Cryosurgery

The application of liquid nitrogen has been evaluated in some centres. The extreme cold (-196°C) of the application causes coagulation necrosis of the piles, which subsequently separate and drop off. The technique often caused troublesome mucus discharge and pain, and has now been abandoned.

Photocoagulation

The application of infrared coagulation by a specially designed instrument has recently been advocated for the treatment of haemorrhoids that do not prolapse. This is said to be an effective and painless method of treatment.

Operation (haemorrhoidectomy)**Indications for haemorrhoidectomy**

Cases unsuitable for injection or banding treatment are

- Third-degree haemorrhoids;
- Failure of nonoperative treatments of second-degree haemorrhoids;
- Fibrosed haemorrhoids;
- Intero-external haemorrhoids when the external haemorrhoid is well defined.

Complications of haemorrhoidectomy

<u>Early</u>	<u>Late</u>
Pain	Secondary haemorrhage
Acute retention of urine	Anal stricture
Reactionary haemorrhage	Anal fissure

Early complications

Pain may demand repeated pethidine.

Xylocaine jelly introduced through a fine nozzle into the rectum, as necessary, is of considerable value.

Retention of urine is not unusual after haemorrhoidectomy in male patients, and frequently it is precipitated by the presence of a rectal tube or pack, or both. Before resorting to catheterisation, the patient should be reassured, given an analgesic, allowed to stand at the side of the bed in privacy or be assisted to a hot bath into which he may be able to void urine.

Reactionary haemorrhage is much more common than secondary haemorrhage. The haemorrhage may be mainly or entirely concealed, but will become evident on examining the rectum.

Treatment of reactionary bleeding

A suitable dose of morphine is given intravenously. If the bleeding persists, the patient must be taken to the operating theatre and the bleeding point secured by diathermy or under-running with a ligature on a needle. Should a definite bleeding point not be found, suspected areas are under run in this way and the anal canal and rectum are packed.

Late complications

Secondary haemorrhage is uncommon; when it occurs, it does so about the 7th or 8th day after operation. It is usually controlled by morphia but, if the haemorrhage is severe, an anaesthetic should be given and a catgut stitch inserted to occlude the bleeding vessel.

Anal stricture

A rectal examination at the 10th day will indicate whether stricturing is to be expected. It may then be necessary to give a general anaesthetic and dilate the anus. After that, daily use of the dilator should give a satisfactory result.

Anal fissure and submucous abscesses may also occur.

Treatment of complications**Strangulation, thrombosis and gangrene**

Adequate antibiotic cover is given from the start. Besides adequate pain relief, bed rest with frequent, hot sitz baths and warm saline compresses with firm pressure usually cause the pile mass to shrink considerably in 3—4 days when standard ligation and excision of the piles can be carried out. Some surgeons consider that the operation at this stage increases the risk of postoperative stenosis and delay surgery for a month or so.

Severe haemorrhage

The cause usually lies in a bleeding diathesis or the use of anticoagulants. If such are excluded, a local compress containing adrenaline solution, with an injection of morphine and blood transfusion if necessary, will usually control the haemorrhage. After blood replacement is adequate, ligation and excision of the piles may be required.

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